CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.15/SME/CSR-8/922d/CEMENT/2015-16 Date: 16.08.2015

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. S.M. Eregowda,** #1096, 5th Cross, Maheshwari Nagar, T. dasarahalli, Bangalore – 560057.
***NAME OF THE WORK**	:	Improvements and construction of drain at Ammaji Chowtri back side, Bhuvaneshwarinagara in Dasarahalli Ward No.15, BBMP, Bangalore.
***REFERENCE**	:	BBMP/DZ/AEE/TDSD/PR/2015-16
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	14.08.2015
PERIOD OF TESTING	:	14.08.2015 to 16.08.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	490 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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Job No.: CTCE/BBMP/W.No.15/SME/CSR-8/922d/SAND-Gradation/2014-15 : 16.08.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. S.M. Eregowda,**
#1096, 5th Cross, Maheshwari Nagar, T. dasarahalli, Bangalore – 560057.

*** Name of Work** : Improvements and construction of drain at Ammaji Chowtri back side, Bhuvaneshwarinagara in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 14.08.2015

Date of Testing : 16.08.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.00	90-100	90-100	90-100	95-100
2.36	75.00	60-95	75-100	85-100	95-100
1.18	54.20	30-70	55-90	75-100	90-100
600 Micron	32.70	15-34	35-59	60-79	80-100
300 Micron	17.10	5-20	8-30	12-40	15-50
150 Micron	6.10	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.15/SME/CSR-8/922d/AGG/GR/2015-16 : 16.08.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. S.M. Eregowda,**
#1096, 5th Cross, Maheshwari Nagar, T. dasarahalli, Bangalore – 560057.

*** Name of Work** : Improvements and construction of drain at Ammaji Chowtri back side, Bhuvaneshwarinagara in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 14.08.2015

Date of Testing : 16.08.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.60	95-100	85-100
20	44.65	30-70	0-20
10	18.80	10-35	0-5
4.75	3.75	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.15/SME/CSR-8/922d/CC Solid Block/2015-16 : 16.08.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. S.M. Eregowda,** #1096, 5th Cross, Maheshwari Nagar, T. dasarahalli, Bangalore – 560057.
* Name of the Work	: Improvements and construction of drain at Ammaji Chowtri back side, Bhuvaneshwarinagara in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2015-16
Sample Received on	: 14.08.2015
Date of Testing	: 16.08.2015
Size of Blocks	: 400mm x 150mm x 200mm
Cross Sectional Area	: 60000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	25.63	198.3	3.31	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	26.47	196.5	3.28	
3	Block 3	26.89	190.5	3.18	
4	Block 4	24.36	191.2	3.19	
5	Block 5	25.39	192.3	3.21	
6	Block 6	26.31	195.3	3.26	
7	Block 7	24.85	196.2	3.27	
8	Block 8	25.95	198.2	3.30	

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CIVIL-TECH CONSULTANTS AND ENGINEERS
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T-2377

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
*** Agency**	: **Mr. S.M. Eregowda,** #1096, 5th Cross, Maheshwari Nagar, T. dasarahalli, Bangalore – 560057.
*** Name of the work**	: Improvements and construction of drain at Ammaji Chowtri back side, Bhuvaneshwarinagara in Dasarahalli Ward No.15, BBMP, Bangalore.
*** Reference**	: BBMP/DZ/AEE/TDSD/PR/2015-16
*** Sample ID**	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
*** Grade of Concrete**	: M_{15}
Compressive Strength as on	: 28th day
Sample Received on	: 19.08.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	19.08.2015	16.09.2015	8.095	350.4	15.57
2	19.08.2015	16.09.2015	8.180	361.5	16.07
3	19.08.2015	16.09.2015	8.275	368.3	16.37

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Job No.: CTCE/BBMP/W.No.15/SME/CSR-8/922d/CUBE/2015-16 17.09.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. S.M. Eregowda,**
#1096, 5th Cross, Maheshwari Nagar, T. dasarahalli, Bangalore – 560057.

*** Name of the work** : Improvements and construction of drain at Ammaji Chowtri back side, Bhuvaneshwarinagara in Dasarahalli Ward No.15, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 20.08.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.08.2015	17.09.2015	8.150	478.3	21.26
2	20.08.2015	17.09.2015	8.275	495.5	22.02
3	20.08.2015	17.09.2015	8.364	510.6	22.69

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ಟಿ.ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
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16.08.2015

Job No.: CTCE/BBMP/W.No.15/SME/CSR-8/922d/Pre slab/2015-16

TEST REPORT ON CONCRETE CORE (PRE CAST SLAB)

* Name of Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Mr. S.M. Eregowda,** #1096, 5th Cross, Maheshwari Nagar, T. dasarahalli, Bangalore – 560057.
* Name of work	:	Improvements and construction of drain at Ammaji Chowtri back side, Bhuvaneshwarinagara in Dasarahalli Ward No.15, BBMP, Bangalore.
Referece	:	BBMP/DZ/AEE/TDSD/PR/2015-16
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast slab
Sample received on	:	14.08.2015
Date of Testing	:	16.08.2015
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	77.00	0.387	2559.71	1.54	0.955	32.35	16.48	17.79	16.99	21.24
2	50.00	79.00	0.396	2552.93	1.58	0.960	32.80	16.70	18.04	17.32	21.65
3	50.00	81.00	0.408	2565.34	1.62	0.965	33.75	17.19	18.56	17.91	22.39

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